UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE

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SUBJECT—

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TITLE

FOREST INSECT SURVEY
SALMON NATIONAL FOREST
1940

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COMMENTS AND RECOMMENDATIONS

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FOREST INSECT SURVEY
SALMON NATIONAL FOREST
1940

A number of the ponderosa pine and Douglas fir stands of the Salmon National Forest were covered by an insect survey in the fall of 1939.

Data concerning the present status of the bark beetle infestations were obtained from 14 drainages, comprising some 83,680 acres. As a result of this survey infestations of the western pine beetle, Dendroctonus brevicomis, was recorded in 10 of the drainages, with infestations of the Douglas fir beetle, Dendroctonus pseudotsugae, in 3 of them.

Although an infestation of the western pine beetle was found to be widely spread throughout most of the ponderosa pine stands examined, it was not considered as being potentially serious except in the Colson Creek, Spring Creek, and Squaw Creek drainages. Control measures were recommended and later undertaken against an estimated infestation of 708 infested ponderosa pine in the Colson Creek drainage. Although this estimate was considered as being considerably high, it proved to be particularly erroneous, as less than 200 trees were actually treated. This error resulted from a confusion between 1st and 2nd generation attacks, and the inclusion of too large an acreage. The trees were treated by CCC labor from camp F-401 under extremely adverse conditions during the winter of 1939-1940.

A check survey of these three areas was made during October 1940.

The following data obtained by a 4 percent cruise show the status of the western pine beetle infestation within the Colson Creek drainage:

INFESTED TREES PER ACRE

Acres	Generation 1st	Generation 2nd	Total 1940	Total 1940 kill 1st and 2nd generation	
4,480	.11	.09	.20	1st	493
				2nd	403
					896

It is difficult to compare the severity of the present infestation with that of the previous season because of the error within the 1939 data. During the control operation 125 trees were treated on an area of 1,600 acres. These figures indicate an infestation of .08 of an infested tree per acre on the area covered by control. However, as the acreage covered contained practically all of the infested trees in the unit, the data must be considered as depicting the actual status of the 1939 infestation. The 1940 infestation is without question more severe than in 1939. The data secured is believed to be representative of the area, as the mistakes of the previous season have been eliminated and a much better coverage was obtained.

The present infestation is more severe in the lower and drier parts of the unit, where over one-half of the 1940, second-generation attacks are estimated to be on an area of 1,460 acres. On this smaller area the data show an infestation of .15 infested trees per acre, which are 2nd generation attacks, or a total of 220 infested trees.

The darker portions of the enclosed map shows the area of severest infestation.

Squaw Creek

An extensive but thorough examination was made of the ponderosa pine stands of the Squaw Creek drainage. As only a few 1940 infested trees were found during this examination, the addition of sample strip was not considered necessary. It was evident that the severe infestation which was present on the drier sites in 1936-1938 has apparently returned to a nearly normal condition at this time.

Spring Creek

An examination of the Spring Creek drainage indicated that the western pine beetle infestation is not as severe as recorded in 1939. At that time the total loss for the season, which included both 1st and 2nd generation attacks, amounted to .17 infested trees per acre. The greatest loss has been and continues to be on the drier southern slopes.

Salmon River Road

There is a rather large number of insect-killed ponderosa pine along the recently constructed road between camp F-401 and North Fork. While injuries resulting from road construction are no doubt indirectly responsible for the attacks of a few of these trees, most of them were not injured and occur in equal numbers on both sides of the river. A rough comparison of 1940 killed trees and green stand show a 4 percent loss between camp F-401 and Shoup, Idaho; and a 2 percent loss between Shoup and North Fork, Idaho.

The difference in the severity of the infestation between these two sections can probably be attributed to an increased dryness or poorer site along the Shoup - Camp F-401 sections. It is also possible that as the road along the heavily infested portion is of more recent construction, this year's loss contains the trees injured during construction.

Respectfully submitted,

TOM T. TURRELL
Senior Scientific Aide

COMMENTS AND RECOMMENDATIONS

by
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It is somewhat difficult to explain, with any degree of positiveness, the situation that now prevails within the Colson Creek drainage. Unfortunately when the institution of control is followed by an increase in the severity of the infestation, the project is usually branded as a failure. This is unfortunate, for if the true picture could be drawn it would be found that in most instances greater results are obtained from such operations than when a marked reduction in the severity of the outbreak follows control. When control is directed against a rapidly increasing outbreak, any infestation that is left untreated may the following seasons build the loss to an equal or even greater severity than that which previously existed. As a result control measures must be considered as reducing the subsequent season's loss in proportion to the part of the infestation which is treated. To consider last winter's control work within the Colson Creek drainage as a failure would be improper. During this project the infested trees on a portion of the area were treated, which did not contribute to this season's increased severity but which can be considered as reducing the number of 1940 attacked trees in proportion to the amount of the infestation treated.

It is apparent that the timber stand of this drainage can be considered as susceptible to bark beetle attack. This position is strengthened by the fact that within areas adjacent to this drainage there is no comparable concentration or " build up of infestation".

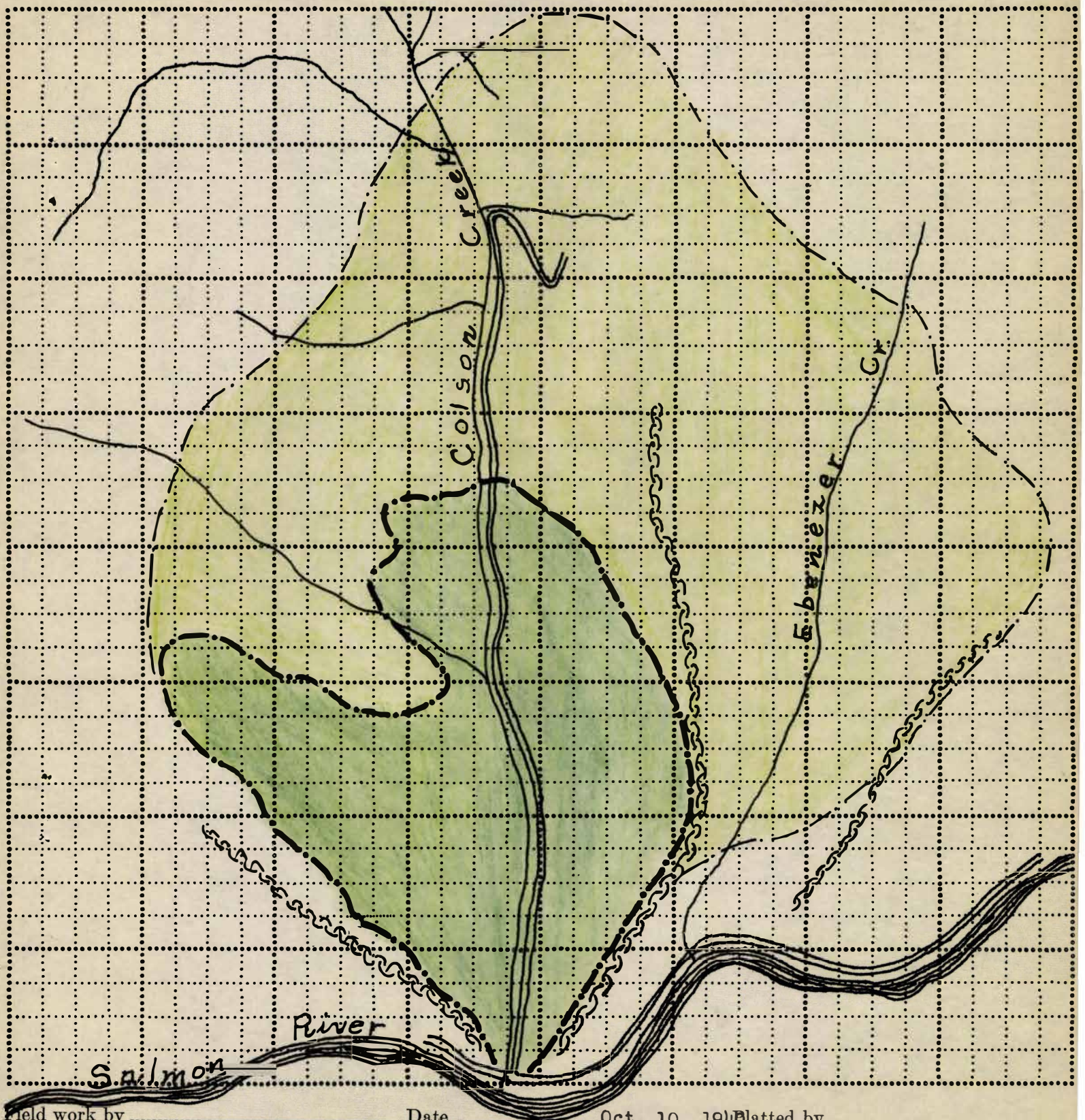
In using existing conditions to predict the trend of this infestation, a marked increase can be expected in the severity of the 1941 infestation within this area. It is therefore recommended that as CCC personnel is available, the infested trees within the Colson Creek area be treated during the present winter as of last season. Although this project should cover as much of the drainage as feasible, the concentrated infestation within the lower portion of the area, as shown on the attached map, should receive first consideration.

Form 878
(Rev. Feb. 1930)

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land district. Mag. declin. _____ Area 1,460 acres

Salmon National Forest (Case designation) _____ (Subdivision and section) T. _____ R. _____ Mer. Scale 2 inches=1 mile



Field work by _____ Date Oct. 10, 1940 Blatted by _____

Remarks Area of greatest insect kill in the Colson Creek drainage.

Approved _____, 19_____

_____
Approving Officer.

U. S. GOVERNMENT PRINTING OFFICE 8—3466

Form 878
(Rev. Feb. 1930)

UNITED STATES DEPARTMENT OF AGRICULTURE—FOREST SERVICE

_____ Land district. Mag. declin. _____ Area 1460 acres

Salmon National Forest R. _____ Mer. Scale 2 inches=1 mile
(Case designation) (Subdivision and section)

Field work by _____ Date Oct. 10, 1940 Platted by _____

Remarks Area of greatest mineral kill is the Colson creek drainage
~~Colson creek Unit 1460 Acres~~

Approved _____, 19____

_____
Approving Officer.

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